SCIENCE & GOVERNMENT REPORT

10th Year of Publication

The Independent Bulletin of Science Policy

Vol. X, No. 12 | P.O. Box 6226A, Washington, D.C. 20015 | July 1, 1980

Academy President Assailed for Diet Report

Following the primary explosion set off by the Food and Nutrition Board's widely discredited exoneration of dietary fat and cholesterol, "Toward Healthful Diets," (SGR Vol. X, No. 11), there have been a number of secondary blasts—some directed at the Board, others at its parent agency, the National Academy of Sciences.

First off, the Board's Consumer Liaison Panel—a loosely attached advisory group matched by a counterpart industry panel—promptly announced that it was severing its ties to the Board. The ties, of course, were never particularly strong, as was made clear when the chairman of the Panel, James Turner, a Nader alumnus, called a press conference June 11 at the Academy and announced the severence. Turner said that "The

Research Commission Urges US To be Sweeter to Academe—Page 4

panel members cannot continue to affiliate their names with a scientific committee that shows such little concern for the public or its peers."

He went on to explain that the panel intended to remain in being and hoped to establish some sort of link with the Academy for the purpose of representing consumer interests in nutritional affairs. But there was no sign of reciprocity for this expectation. Turner then turned the meeting over to two medical specialists, William Castelli, Director of the Framingham Heart Study, a longterm, NIH-sponsored big population study, and Kent Peterson, Executive Vice President of the American College of Preventive Medicine.

Their statements and responses to reporters' questions about "Toward Healthful Diets" were peppered with "irresponsible," "unjustified," "unscientific," and similar expressions of opprobrium.

On June 16, the *Washington Post*, which had earlier blasted the diet study in an editorial, took up the subject of the impending retirement of Academy President Philip Handler, and offered the editorial opinion that the institution needs fixing. Without even a few customary kind words for Handler's 11 years at the helm, the *Post* editorial strongly suggested that the Academy is so hungry for contracts to support its overblown hired staff that "Almost any request for a report or a study that comes accompanied by funds is accepted; many should not be. The huge number of committees exceeds the number of expertly qualified scientists to serve on them." The result, the *Post* said, is that the Academy has difficulty monitoring the bias of committee members and the quality of their reports—dual difficulties "largely responsible for the recent report by the Food and Nutrition Board that has so badly damaged the Academy's reputation."

Whatever the validity of those observations, what is to be noted is that *Washington Post* editorials play a major role in opinion-making in the capital; if the *Post* says the Academy is malfunctioning and that its reputation is damaged, that settles the matters, as far as a lot of powerful people are concerned.

The next blow at the Academy came June 18, when Rep. Frederick W. Richmond (D-NY), Chairman of the Agriculture Subcommittee on Domestic Marketing, Consumer Relations, and Nutrition, opened two successive days of hearings on the diet report.

Employing an acerbic manner, and frequently shouting, Richmond made it plain at the outset that he was gunning for the Academy and, in particular, NAS President Handler. For purposes of fireworks, the two make an ideal pair, since Handler is gripped by the delusion that official Washington regards him with awe and reverence as the voice of science in the nation's capital. (In a profile of the Academy and Handler on June 10,

(Continued on Page 2)

In Brief

Speaking June 19 to the AAAS' Colloquim on R&D Policy, White House Science Adviser Frank Press, delivering a long and congratulatory report on the Administration's research policies, referred to the paper he gave at last year's pow-wow. Said a drowsy member of the audience: "I thought this was last year's paper."

Despite the election-year hoopla about Carter's generosity toward R&D, the fact is that it's a highly selective generosity. As stated in a summary of the AAAS review of the budget, "The priority given the overall defense budget accentuates the growing disparity between the military and all other R&D. Military R&D showed real growth above the projected rate of inflation while non-military R&D showed a decline."

A report soon to be published by the National Science Foundation clearly illustrates the boom in defense R&D: "When R&D programs are viewed as a whole, the share of national defense within the total is by far the largest—51 per cent in 1981, compared with 47 per cent in 1980."

. . . Handler and Rep. Richmond Swap Blasts

(Continued from Page 1)

the *New York Times* politely reported that "Dr. Handler has said that he controls or influences most major scientific appointments. Interviews with Congressional and administration officials leave some doubt about that," *Times* reporter Robert Reinhold added, "but the academy does command respect in Washington.")

The megalomanic Academy president and the intemperate Congressmen had at each other—following a slew of nutrition specialists who generally faulted the diet report as being in conflict with the main body of contemporary scientific and medical evidence.

Richmond, with lots of suggestions fed to him and his staff by the aroused troops of the public-interest nutrition lobby, opened the hearings with a direct and hostile challenge to Handler. The Academy president, he noted, had recently urged the scientific community to get after scientists who distort scientific knowledge for political purposes—to, as Handler put it, "unfrock the charlatans."

"We take Dr. Handler's words to heart," Richmond said. "We want to be certain that his own National Academy of Sciences has been just as attentive to his prescription. How did the Food and Nutrition Board proceed to develop this divisive report? Did it dissemble in its work. . .?" Richmond asked "Did it omit to review certain studies that would undermine its conclusions? Did it misrepresent certain data? Did it, in sum, operate more on the level of politics than of science?"

Richmond then proceeded to refer to the Academy as a "90-per-cent publicly funded institution that operates in darkness like a private corporation in pronouncing public policy."

Handler, accompanied by the two key figures in the production of the report, biochemistry professors Alfred E. Harper and Robert E. Olson, opened his testimony by announcing that he takes "umbrage" at a letter to the subcommittee from former FDA Commissioner Donald Kennedy. The letter simply said that the Academy's diet report was produced by scientists who are not as answerable to the public as are government scientists who produced conflicting reports. Noting that Kennedy, in his FDA days, had encouraged non-government scientists to advise that agency, Handler went on to assert "great umbrage" at the letter.

Then Handler took great personal credit for setting up what he described as unique mechanisms for surfacing bias on the part of Academy committee members. "I know of no other organization that works as assiduously" on the bias problem, Handler said. He denied that the Academy makes policy for the government, and then revealed that it was at his suggestion that the Food and Nutrition Board undertook the tasks of preparing diet advice for the general public. The specific trigger, he said, was a book, "Everything You Want to Know About Nutrition," which, he said, was filled with errors. (What Handler left out was that the Academy emerged successful from a legal encounter with the publishers over unkind remarks in that book concerning the integrity of the Food and Nutrition Board.)

(Continued on Page 3)

Following is the statement by former Food and Drug Commissioner Donald Kennedy that evoked "great umbrage" from Academy President Philip Handler at a House subcommittee hearing on June 20:

●

I have been asked to comment on recent advice on diet given by the Food and Nutrition Board, National Academy of Sciences/National Research Council. As the sharp differences between the Food and Nutrition Board's recommendations and those issued earlier this year by HEW and USDA indicate, there is a disagreement in the nutrition community about the advisability, for most people, of reducing dietary cholesterol and fat. I cannot provide expert scientific testimony on the merits of this controversy. I am, however, familiar—as an NAS member and a former officer of the NRC and its committees, and as a former health agency head—with some differences in procedure between the two kinds of organizations that have produced the conflicting advice.

The position set out by the departments of Health, Education and Welfare and of Agriculture were based on analysis of the available data by full-time, capable professional scientists. That published by NAS/NRC is based upon review by a somewhat smaller number of equally-distinguished scientists who take time from other duties to provide advice to government. The differences in the time and attention, or in the level of ability, supplied by the two groups is probably not significant. There is, however, a significant difference in their accountability to the public. Committee members at NAS/NRC are not subject to the same strict scrutiny for conflict of interest as are government scientists, nor does the adequacy of that scrutiny enjoy the full protection of Congressional oversight. That distinction may ordinarily be unimportant. When the matter is as controversial as the subject of this hearing, however, it may become critical. That is especially true when the more prudent advice offered to the public comes from the source with the better guarantee of objectivity.

. . .NAS Chief Says Report Will be Expanded

(Continued from Page 2)

The Board, he continued, had to skimp on the study because it couldn't get Department of Agriculture funds to carry it out—a failure, Handler said, that can be traced to a mysterious intervention by Turner's Consumer Panel.

After permitting Handler to go on for about 10 minutes, Richmond jumped in to demand an explanation for the Board's lack of consultation with recognized authorities on diet and cardiovascular disease. "Was it proper?" he yelled at Handler.

Handler conceded that "It was ungracious and I regret that. But it's not illegal, immoral, or improper."

Richmond then wanted to know why the Board didn't discuss its report, prior to public release, with Richmond's subcommittee or its Senate counterpart, which produced "Dietary Goals for Americans," several years ago.

"They didn't discuss their report with us," Handler replied.

Richmond then described himself as "terribly aggrieved" that the Board hadn't consulted with the National Heart, Lung, and Blood Institute.

Getting surlier by the moment, Handler retorted that the major government agencies issuing diet recommendations hadn't sought the advice of the Board. And he said, "I do not understand, sir, this line of argument that somehow we have to have someone else's permission to say something."

Richmond, getting angrier, then accused the Academy of attempting to usurp the policymaking role of executive agencies.

Handler shot back that "universities don't need permission from the government to publish scholarly studies. . ."

Richmond: "Universities aren't supported 90 per cent by the US government." And the Congressman, insisting that the Academy stands close to being a "government agency," said, "You're chartered and financed by the United States government."

Handler, growing more exasperated, asked, "Do you deny us our right to speak on any subject" where our advice isn't sought?

"Your obligation, "Richmond insisted, "was to go to the USDA (Department of Agriculture) and HEW and put together a task force and work this out so that the American people wouldn't be totally confused."

Handler: "It would be one rotten country if that were true."

Similarly rough exchanges took place between Handler and other members of the subcommittee.

It would, of course, be prudent for the Academy to drop this matter, lick its wounds, and suffer out the final year of Handler's presidency. However, Handler disclosed that the Food and Nutrition Board is returning to the task of providing diet advice for the public. In his view, the shortcoming of the controversial report is its slenderness—just 20 pages and no backup material. That's to be corrected by a project now underway, he disclosed at the hearing.

The shame of it all is that the National Academy of Sciences can be an important and valuable institution for bringing scientific and technological wisdom to public affairs. But it's been in a tailspin for several years—and all Washington knows it.—DSG

Chemists Report Salary Lag

Plenty of jobs, but pay scales lagging behind inflation—that's the employment picture for chemists, according to a survey by the American Chemical Society.

Adjusted median salaries for chemists, it's reported in *Chemical & Engineering News,* are now 20 per cent below what they were in 1973. "They are, in fact, at about the same level as they were in the early 1960s," the survey found.

The top median pay for PhDs—$36,000—was in industry, with the federal government next, at $34,000, and academe last, at $25,000.

© Science & Government Report, Inc., 1980

ISSN 0048-9581

Editor and Publisher
Daniel S. Greenberg

Associate Publisher
Wanda J. Reif

Contributing Editor
Anne Roark

Circulation Manager
Susan Burke

European Correspondents
Michael Kenward (London); Francois Seguier (Paris)

Independently published by *Science & Government Report,* Inc., twice monthly, except once each in January, June & July. Annual Subscription: Institutions, $89.50 (two years, $168.50); individuals, $48.50 (two years, $82.50). Editorial offices at 3736 Kanawha St., N.W., Washington, DC 20015. Tel. (202) 244-4135. Second class postage paid at Washington, DC. Please address all subscription correspondence to Box 6226A, Northwest Station, Washington, DC 20015. Reproduction without permission is prohibited. SGR is available on Xerox University Microfilms. Claims for missing back issues will be filled without charge if made within six months of publication date.

Study Urges Harmony in US-Academic Ties

When six big academic organizations created the National Commission on Research two years ago, the stated purpose was to explore difficulties in the research community's relations with Washington; the expressed promise was that the end product wouldn't be just another self-serving plea for more favorable treatment of university science.

With three reports of planned total of five now published, it's evident that what's being dished out is, in fact, another self-serving plea, but the quality is higher than is common for this dour genre, and the old arguments for more money and less burdensome regulations appear more plausible.

Whether anyone is listening, however, is another matter. With the political side of Washington now wholly absorbed in election-year plottings, and the National Science Foundation still lacking a director to replace La Jolla-bound Richard C. Atkinson, the products of the Commission's labor find no eager audience in relevant places. The reports, of course, will keep, but it's a near-certainty that by the time the next presidential inauguration takes place, some other outfit or two will come out with a pile of reports on the same subject, and claim prompt notice for them because they're fresher.

The Commission, which is scheduled to go out of existence with the publication of its final reports later this summer, was established by the American Council of Learned Societies, the American Council on Education, the Association of American Universities, the National Academy of Sciences, the National Association of State Universities and Land Grant Colleges, and the Social Science Research Council.

Among the Commission's concerns in the second report, "Funding Mechanisms," is that university laboratory equipment is becoming out of date—and no one is doing anything about it.

But with financial realities being what they are, the group concedes, some sort of research "priority list" for research should be drawn up in the decade ahead. The Commission suggests, rather naively, the creation of *ad hoc* committees of scientists to advise the government and universities on how to allocate money among competing problems.

Not only could they decide what disciplines most needed support, the report suggests, but the committees could also determine how the money should be spent. Should funds, for example, go for equipment, or staff, or general operating expenses?

To increase support for federally sponsored research projects, the Commission urges policy makers to consider several new financing mechanisms. Universities, for example, might think about engaging in "debt financing"—in other words, mortgage their equipment.

Members of the National Commission on Research are:

William D. Carey, Executive Officer, AAAS
Philip Cohen, Professor Emeritus, University of Wisconsin Medical Center
Dale R. Corson, President Emeritus, Cornell University
Edward E. David Jr., President, Exxon Research and Engineering Company
Carl Kaysen (Consulting Member), Sloan Commission on Government and Higher Education
Donald N. Langenberg, Professor of Physics, University of Pennsylvania (newly appointed NSF Deputy Director)
Irwin C. Lieb, Professor of Philosophy, University of Texas
Charles A. Mosher, former Congressman, Woodrow Wilson International Center for Scholars
Raymond L. Orbach, Professor of Physics, UCLA
Cornelius Pings, (Director), Vice Provost and Dean of Graduate Studies, Caltech
William Sewell (Chairman), Professor of Sociology, University of Wisconsin
Monte C. Throdahl, Senior Vice President, Monsanto Corp.
Linda S. Wilson, Associate Vice Chancellor for Research, University of Illinois, Urbana

Under the system the Commission envisages, the mortgages could be repaid by charging the sponsors of the research for use of the equipment. Another plan, the Commission suggests, would be use of state revenue bonds to raise money for equipment expenses.

Perhaps most important of all, the Commission says, is for the government and universities to develop "incentives and strategies" to encourage researchers and institutions to share equipment and, thus, save money.

One of the commission's most radical proposals—although it, too, is not a new idea— is for the government to provide support for overall operating expenses. The Commission would like to see the government establish what it calls "broad support" for an institution's "research capacity." Funds in this category might range from 1 to 3 per cent of an institution's total federal budget for research. The funds, the Commission says, would serve as a kind of "balance wheel to keep a university research effort functioning efficiently despite the irregular and fluctuating forces caused by other funding mechanisms."

Presumably what the Commission has in mind is similar to what Steven Muller, President of Johns Hopkins University, suggested when he recently urged the government to endow a "small group of excellent universities" with enough money to carry out the important basic research. It is an elitist idea, he acknowledged, but it would give the best institutions (the ones with the proven track records) the stable support with minimal red tape.

(Continued on Page 5)

. . .Says Rules Unsuited for Universities

(Continued from Page 4)

In "Accountability," the Commission deals extensively with the bureaucratic burdens that universities must bear in a dealing with research-supporting agencies. One remedy, it suggests, would be in a toning down of the requirements in the Office of Management and Budget's notoriously inscrutable Circular A-21, which purports to state the standards governing what Washington will and won't pay for in its research dealings with academe.

The problem with existing accountability requirements, the Commission argues, is not so much that universities have been unable to account properly for a contested $85 million out of a total $1.5-billion research budget. The problem is more a matter of finding an accounting system that makes sense within the context of the somewhat disorganized academic culture.

As many of their colleagues have done before them, the members of the Commission writing the report try to explain that one of the key problems between government and academe is the conflict between single--purpose grants and multi-purpose research.

"Universities carry out teaching, research, and service as an integrated whole, not as separate functions," the report says. "Federal programs are usually designed to support only one of these functions.

"Federal officials striving to obtain the most and the best research with limited funds available want to avoid unintended support of anything else."

Unfortunately, the Commission is not any more specific than any other group has been in suggesting a cost-accounting system that would satisfy the government's need for precision and the university's need for flexibility.

The report basically reiterates what everyone already knows—that "mutual suspicions, ignorance, and misunderstandings" are getting in the way of an efficient national scientific effort.

The three reports issued so far repeat some old truths about university research, but offer few specific suggestions for change. Thus, the Commission, for example, in its discussion of the peer-review system, takes the old line that while it may not be a perfect, it's the best we've got and, therefore, should be nourished.

The Commission recognizes that the system might not always operate as fairly and objectively as it might—minority groups and women, for example, charge the system often discriminates against them. But, on the whole, all that is required are periodic examinations of the peer-review panels to ensure they are working "effectively and equitably," the Commission says.

There is not much bite behind the commission's recommendations and few, if any, of its ideas are new. One cannot help but wonder why all the time and money was spent on putting together a Washington staff, printing glossy-bound reports, and all the other paraphernalia of Washington's booming study and report industry.

The best argument in the Commission's favor, of course, is that its demands and warnings may be taken somewhat more seriously than the pleas of individual researchers or institutions. Moreover, it's true that the federal bureaucracy must be told something repeatedly before it takes notice.—Anne Roark

(The author is an Assistant Editor of the *Chronicle of Higher Education.)*

Commission Reports Available

The Commission's first report, "Accountability: Restoring the Quality of the Partnership," was released in March. The second and third are titled, "Funding Mechanisms: Balancing Objectives and Resources in University Research," and "Review Processes: Assessing the Quality of Research Proposals." All are available free of charge from: the National Commission on Research, 2600 Virginia Avenue, Nw., Suite 1003, Washington, DC 20037.

Two other reports—one on research personnel and the other on cooperation among industries, universities, and government—are scheduled to be released later this year.

Puerto Rico Gets NSF Center

The National Science Foundation has awarded the University of Puerto Rico a four-year, $2.7-million grant to establish a Resource Center for Science and Engineering. The Center, to be directed by Manuel Gomez-Rodriguez, Dean and Professor of Physics at the university, is intended to assist science and engineering training and research in the commonwealth; it will be operated in collaboration with the Catholic University, the Ana G. Mendez Foundation and Inter American University.

NSF has previously established two similar centers: at Atlanta University, Georgia, as hub of a network of 38 predominantly black institutions, and under the University of New Mexico and New Mexico State University, in collaboration with 15 other institutions in the Southwest.

U of California: Weathering the Storms

California, with 10 per cent of the United States' population, can claim a quarter of the current membership of the National Academy of Sciences, according to the Institute of Governmental Studies at Berkeley, and 27 per cent of living American Nobel Laureates. And the state's scientific pre-eminence is increasing: 23 of the 59 new members elected to the Academy this year were Californians.

The University of California is the basis for the state's intellectual achievements, which extend to the social sciences but not to the arts and literature, where California is under-represented among the membership of the Institute and Academy of Arts and Letters and among Pulitzer Prize winners. Most Californians believe UC is the greatest public university system in the world and there are many academics abroad who agree. For more than a decade unfavorable news reports have been flowing out of UC—rebelling students, hostile politicians, rebelling taxpayers—but the senior administrators and faculty members who run the system remain remarkably confident, in private as well as public, about its underlying strength and their ability to maintain California's scientific leadership.

However, while the University of California has merely held its ground over the past 15 years, private universities in the state—above all Stanford—have made spectacular gains. In overall reputation, Stanford has certainly overtaken UC Berkeley and indeed it is probably America's second most prestigious university after Harvard. But, taken together, the nine UC campuses are still more important, scientifically as well as educationally, than Stanford, the California Institute of Technology and University of Southern California put together.

Relations between California's public and private institutions, and between Stanford and Berkeley in particular, remain cordial. There seems to be surprisingly little jealousy at Berkeley for the growing wealth and prestige of the private university across the Bay at Palo Alto. "We complain constantly about the penny--pinching administration here, and outsiders often say how envious we must be of colleagues at Stanford, but for some reason we're not," said one Berkeley professor, who believes he would be earning several thousand dollars a year more at Stanford.

The twin threats of fiscal squeeze and declining enrollments that face most of American higher education are also the main problems facing the University of California in the years ahead. The defeat of Proposition 9 (which would have halved state income tax) on June 3 came as a great relief, of course, but even if it marks the end of the Californian tax revolt—and not just the political decline of cantankerous old Howard Jarvis—the fiscal outlook for public enterprise remains bleak.

"We are going to have a gradual squeeze rather than the abrupt squeeze we would have had if 9 had passed," said Patrick Callan, Director of the California Postsecondary Education Commission. Because the state had to bail out local agencies that lost two-thirds of their property tax revenues after Proposition 13 two years ago, "it has been spending about $1 billion a year more than it has been taking in," Callan said. "The surplus will soon be used up."

The outlook for the UC budget during the 1980s, therefore, is a slower increase than general inflation, and that will inevitably mean further erosion of academic salaries. There were three years during the inflationary 1970s when faculty members received no salary increases at all, and according to the Postsecondary Education Commission (the coordinating body for the three tiers of public higher education in California) UC faculty lost 44 per cent of their purchasing power compared to the cost of living between 1968/69 and 1978/79. The commission says the UC faculty is now significantly underpaid in relation to its counterparts at comparable universities elsewhere in the United States.

It is hard to gauge the impact of falling real salaries on the health of the University of California. There has been no mass exodus of established faculty members, and in most subjects, including the natural sciences, there are still hundreds of well-qualified applicants clamoring for the few new faculty positions that open up. But on the other hand, there is an increasing amount of anecdotal evidence that Berkeley is failing to attract its share of the very brightest young researchers.

The cost of housing in the San Francisco area—the highest in the entire nation, according to a real estate survey published last month—is a further obstacle to faculty recruitment. Even Stanford, whose salaries are the second or third highest in the United States, is finding it harder to attract faculty from elsewhere nowadays, and Stanford President Richard Lyman puts the blame firmly on the inflated housing market.

In a few fields, such as computing and engineering, where a severe manpower shortage is developing, universities are finding it very difficult to recruit faculty members in competition with the far fatter salaries of-

(Continued on Page 7)

US-West German Science Pact

The National Science Foundation and its closest West German counterpart, the German Research Association, have signed a 5-year memorandum of understanding for promoting cooperative activities in the natural and social sciences, engineering and mathematics.

Drooping Salaries Hurt Engineering Recruiting

(Continued from Page 6)

fered by high-technology industry in California. "It's especially difficult when you add differentials associated with equipment and lab facilities to the salary differentials," says UC President David Saxon. As he points out, universities cannot possibly keep up with corporations in the acquisition of the most modern facilities in a rapidly changing field like electronics.

Universities will never be able to compete fully with private industry on pay alone; they will always have to rely on the special inducements of the academic lifestyle, says Michael Heyman, who just took over as Chancellor of UC Berkeley from Albert Bowker, the new assistant secretary for postsecondary education in the US Department of Education. But he and other senior UC administrators recognize, with misgivings, the need for selective salary increases to improve the university's recruitment power in shortage areas like engineering.

At present UC has no salary differentials, in theory. The official pay scales are uniform for all subjects on all campuses. But in fact the administration has some flexibility to appoint faculty members to higher points on the salary scale. "It is entirely possible—and it often happens—that an assistant professor in engineering or economics (another shortage area) might receive the same salary as an associate professor in history or English," said Saxon.

UC administrators are prepared to live with bigger differentials between fields and some, like Berkeley's Heyman, believe it will soon be necessary to stop fudging the issue. They are prepared to deal with it explicitly, by introducing new, higher salary scales in certain departments. But they are reluctant to take action for fear of antagonizing the remaining faculty members. "My intuition tells me that, whatever you do to differentiate, you cannot do it by more than 20 per cent or the rest of the faculty will find it unacceptable," Heyman says.

There is also a strong distaste for tackling the problem by giving faculty members more time to undertake lucrative consulting and part-time jobs with California firms, which would be extremely willing to hire them. The rule at most California universities, public and private, is that a faculty member shall not devote more than an average of one day a week to activities outside the university, and academic leaders feel that to allow more—or to increase the number of split appointments with industry—would somehow undermine the intellectual integrity of academe.—Clive Cookson.

(The author is Washington correspondent of the London *Times Higher Education Supplement.)*

In Print

Technology and Trade: Some Indicators of the State of US Industrial Innovation, report to the Subcommittee on Trade of the House Ways and Means Committee, prepared by Mary Ellen Mogee, of the Library of Congress, Science Policy Research Division; clearly lists the ups and downs of R&D inputs and outputs, and concludes US leads in most fields, but growth rates are slipping relative to others, particularly Japan and West Germany; 36 pages, $2.25, available from: Superintendent of Documents, USGPO, Washington, DC 20402. (Specify Ways and Means Committee Print: 96-46.)

Conservation and Solar Energy Programs of the Department of Energy, report of a study by the Congressional Office of Technology Assessment, concludes that DOE's conservation and solar energy (C&SE) programs have some strong points but "A striking conclusion of the [OTA study] panels was that C&SE lacks a clear vision of where it is going and how it will get there"; 80 pages, $3.75 per copy, available from: Superintendent of Documents, USGPO, Washington, DC 20402; order by stock No. 052-003-00757-6.

Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (Parts I and II), first of a series of forthcoming Congressional documents concerning the moon treaty, whose weapons-free features are drawing pot shots from the right. *Agreement,* providing an historical account and analysis, was prepared for, and is available without charge from: Committee on Commerce, Science, Transportation, US Senate, Washington, DC 20510. (Enclose a self-addressed mailing label.)

Subscription Form

Science & Government Report
Northwest Station
Box 6226A
Washington, D.C. 20015

☐Renew my subscription; ☐Check enclosed

☐Enter my subscription; ☐Please bill

Institutional subscribers: one year, $89.50☐; two years, $168.50☐

Individual subscribers: one year, $48.50☐; two years, $82.50☐

(Overseas airmail, $17.50 per year additional.)

Name _____

Address _____

_____ Zip _____

Carter's R&D Budget—Last Week's Version

Along with the rest of the federal budget, plans for R&D spending have been thrown into confusion by the Administration's twists and turns, not only regarding money for Fiscal 1981 (beginning next October 1) but also for the 1980 fiscal year. It's not yet all settled, since Congress has to complete its budget decisions, but here, for the first time—thanks to an as yet unpublished NSF report—is what the Administration wants to do about R&D spending.

Explanations: the 1979 figures are solid, while the 1980 and 1981 columns show what was originally requested and then what the Administration sought to reduce when Mr. Carter decided in March to cut spending for both years.

(Dollars in millions)

		1980			1981		
	1979 actual	Jan. estimate	Proposed reduction	Revised estimate	Jan. estimate	Proposed reduction	Revised estimate
Total	**$29,012**	**$32,019**	**-$205**	**$31,814**	**$36,364**	**-$868**	**$35,496**
National defense	13,791	15,002	-43	14,959	18,135	-19	18,117
Space research and technology	3,969	4,606	-	4,606	5,119	-201	4,918
Health	3,401	3,682	-32	3,650	3,887	-94	3,792
Energy	3,461	3,834	-69	3,765	3,799	-124	3,675
General science	1,119	1,246	-	1,246	1,435	-64	1,371
Natural resources and environment	1,010	1,090	-	1,090	1,144	-4	1,140
Transportation	798	870	-12	859	916	-41	875
Agriculture	552	604	-3	602	640	-6	634
Education, training, employment, and social services	352	495	-39	456	637	-299	338
Community and regional development	126	125	-8	117	142	-6	136
International affairs	113	124	-	124	131	-	131
Veterans benefits and services	123	126	-	126	135	-5	130
Commerce and housing credit	92	107	-	107	119	-5	114
Income security	36	38	-	38	56	-	56
Administration of justice	47	48	-	48	46	-	46
General government	23	21	-	21	23	-	23

Science & Government Report
Northwest Station
Box 6226A
Washington, D.C. 20015

Second class postage paid at Washington, D.C.

SGR Summer Schedule

The next issue of *Science & Government Report* will be published August 1, 1980.

9999
Xerox-University Microfilms
300 N. Zeeb Rd
Ann Arbor MI 48106